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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/761,655

01/20/2004

Jiun-Nan Chen

67,200-937

3380

7590

03/24/2005

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EXAMINER

TRA, TUYEN Q

ART UNIT

PAPER NUMBER

2873

DATE MAILED: 03/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/761,655

Applicant(s)

CHEN, JIUN-NAN

Examiner

Tuyen Q. Tra

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The amendment filed on 12/30/2004 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

Added material such as "a pair of physical stops" in paragraph [0035.5] is considered as a new matter.

Added material such as "to be physically constrained between appropriate matched pairs of first deflection electrodes and second deflection electrodes" is considered as new matter.

Applicant is required to cancel the new matters in the reply to this Office Action.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 4, 10, 15, 21, 22 and 23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter "a stop", "physically constrained between first and second deflection electrodes" which were not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 4-7 and 9-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Little et al. (U.S. Pat. 6,034,807A).

a) With respect to claims 4, 11, 12, 15 and 16, Little et al. disclose apparatus of a bistable paper white direct view display and further with method for providing and imposing in Figure 3a comprising of a plurality of first substrate (not numbered, bottom substrate) having a first surface; a plurality of first deflection electrode formed at least partially on the first surface of the first substrate; a plurality of deflectable elements supported at only one end (see Fig. 5a and 5b) thereof and connected to the first surface of the first substrate and registered with the plurality of first deflection electrodes; a second substrate (item 40) assembled and spaced opposite the first surface of the first substrate, the second substrate having formed therein a plurality of second deflection electrodes registered singly with the deflectable element and plurality of first deflection electrodes such that a deflectable element is physically constrained between a first deflection electrode and a second deflection electrode(see below figure).

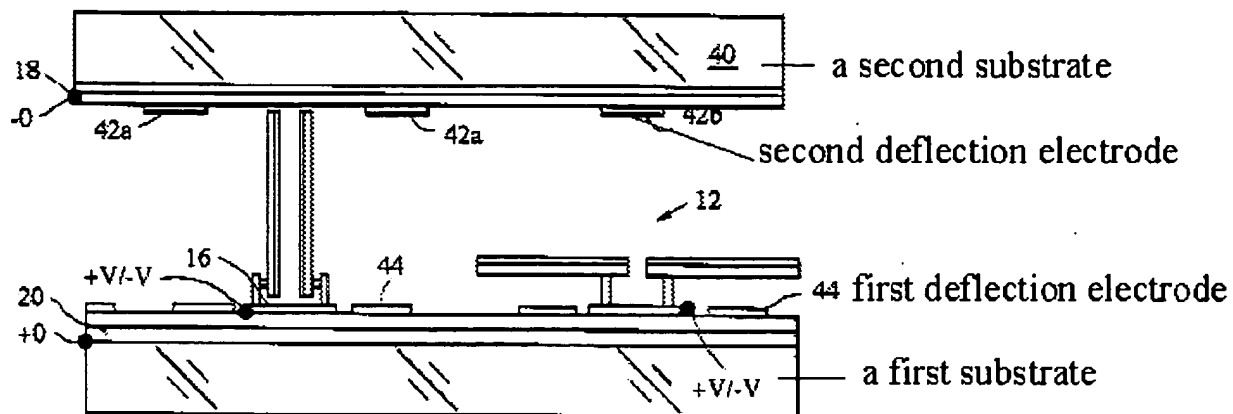


FIG. 3a

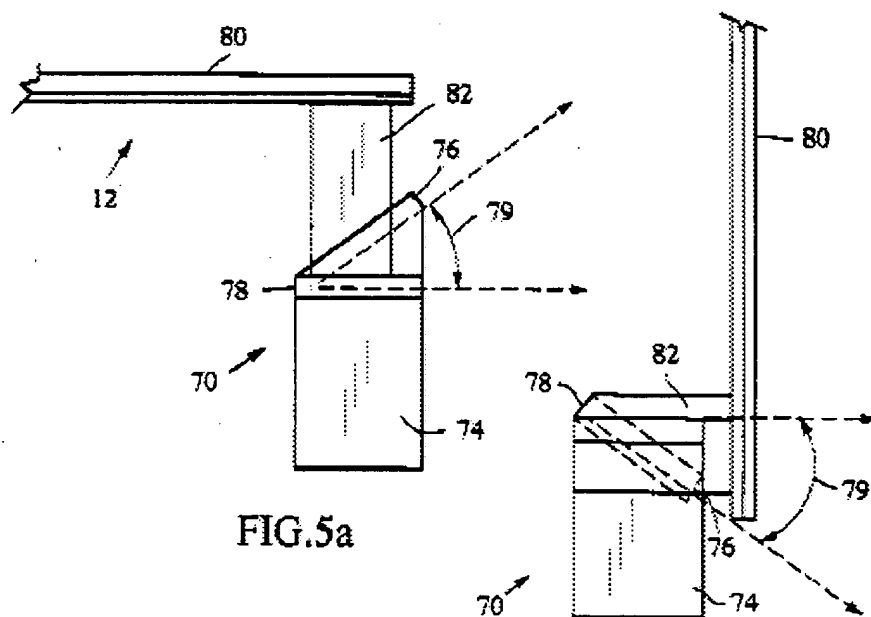


FIG. 5a

FIG. 5b

b) With respect to claims 5 and 19, it is inherent from Little's structure that when application of the same polarity of charge to both the deflection electrode and the deflectable element, the deflectable element is deflected away from the transparent substrate.

c) With respect to claims 6 and 20, it is inherent from Little's structure that when an application of the opposite polarity of charge to both the deflection electrode and the

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deflectable element, the deflectable element is deflected toward from the transparent substrate.

d) With respect to claim 7, Little et al. further discloses in Figure 1 the first substrate (item 30, Fig. 1) is a glass substrate (i.e. transparent substrate).

e) With respect to claim 9 and 10, Little et al. further discloses wherein the second substrate is a transparent substrate (display substrate); wherein the second electrode is transparent.

f) With respect to claims 13, 14, 17 and 18, it should be noted that although claim 13, 14, 17 and 18 are "method claims", the method steps consist of the broad steps of "providing", "applying" etc and therefore these steps would be inherently satisfied by the apparatus of the reference as modified.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Little et al. (U.S. Pat. 6,034,807A), as applied to claim 1 above, in view of Atobe et al. (U.S. Pat. 5,999,306A).

Little et al. disclose a bistable paper white direct view display in Figure 3a comprising of a first substrate (not numbered, bottom substrate) having a first surface; a first deflection electrode formed at least partially on the first surface of the first

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substrate; a deflectable element connected to the first surface of the first substrate and registered with the first deflection electrode; a second substrate assembled and spaced opposite the first surface of the first substrate, the second substrate having formed therein a second deflection electrode registered with the deflectable element (see below figure).

However, Little et al. does not disclose the first deflection electrode is a transparent electrode. Within the same field of endeavor, Atobe et al. disclose in Figure 3B wherein the first electrode is a transparent electrode (made of substance such as ITO).

It would have been obvious, therefore, at the time the invention was made to a person having skill in the art to construct display device with first electrode on first substrate such as disclosed by Little et al., and with transparent electrode such as discloses by Atobe et al., for purpose of allowing the light going through.

RESPONSE TO APPLICANT'S ARGUMENT

8. Applicant's arguments filed 12/30/2004 have been fully considered but they are not persuasive. Applicant's argument as follow:

a) Within applicant's claims 4, 11 and 15, the element of micro-mirror end support only is simply not identical with the element of tortional axis opposite end support provided within micro-mirror structure taught within Atobe and Shrauger.

b) Little 's micro-mirror structure employs mated pairs of first deflection electrodes 44 and second deflection electrodes 42a/b. However, an individual micro-mirror is not

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physically constrained between a first deflection electrode and a second deflection electrode.

With respect to applicant's argument a), examiner have rewritten rejection based on Little reference to overcome applicant argument with respect to claim 11. In additional, applicant fails to disclose in specification an advantage of having one end support only micro-mirror structure.

With respect to argument b), claims 4, 11 and 15 are rejected under 35 USC § 112 because of new matter that has been added into applicant's amended specification.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Robinson et al. (US 6,038,058) discloses a grid-actuated charge controlled mirror and method of addressing the same in Figure 4 with teaching of an one end-supported micromirror (12), a electrodes (33) on substrate (44), and grid electrodes (18) above micromirror (12).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuyen Tra whose telephone number is (571) 272-2343. The examiner can normally be reached on Monday to Thursday from 8:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps, can be reached on (571) 272 - 2328. The fax number for this Group is (703) 872-9306

tt

March 11, 2005


Hung Xuan Dang
Primary Examiner